We claim:

1. A transformed plant, **characterized in that** it expresses at least one leghemoglobin.
2. The transformed plant according to claim 1, **characterized in that** it comprises at least one sequence No. 1 coding for a leghemoglobin.
3. The transformed plant according to claim 2, **characterized in that** it comprises a sequence which has approximately 70% identity with the sequence No. 1.
4. The transformed plant **characterized in that** it expresses at least one hemoglobin or at least one leghemoglobin and at least one hemoglobin.
5. The transformed plant according to any of claims 1 to 4, **characterized in that** the leghemoglobin and/or hemoglobin is selected from plants from the group consisting of *Lupinus luteus*, *Glycine max*, *Medicago sativa*, *Medicago trunculata*, *Phaseolus vulgaris*, *Vicia faba*, *Pisum sativum*, *Vigna unguiculata*, *Lotus japonicus*, *Psophocarpus tetragonolobus*, *Sesbania rostrata*, *Casuarina glauca* and *Canvalaria lineata*.
6. The transformed plant according to any of claims 1 to 5, **characterized in that** the leghemoglobin and/or hemoglobin is derived from Lotus japonicus and Arabidopsis thaliana.
7. The transformed plant according to any of claims 1 to 6, **characterized in that** it expresses the leghemoglobin and/or hemoglobin in a storage-organ-specific manner.
8. The transformed plant according to any of claims 1 to 7, **characterized in that** it expresses the at least one leghemoglobin and/or hemoglobin in a tuber-specific and/or seed-specific manner.

9. The transformed plant according to any of claims 4 to 8, **characterized in that** it comprises at least one of the sequences No. 3 and 5 coding for hemoglobin or at least one sequence No. 1 coding for a leghemoglobin and at least one of the sequences No. 3 and 5 coding for hemoglobin.

10. The transformed plant according to any of claims 4 to 9, **characterized in that** it comprises sequences with approximately 70% identity with the sequences No. 1, 3 and/or 5.

11. The transformed plant according to any of the preceding claims, **characterized in that** it produces starch and/or oil.

12. The transformed plant according to any of the preceding claims, **characterized in that** it is a monocotyledonous crop plant, in particular of the species Gramineae.

13. The transformed plant according to any of claims 1 to 12, **characterized in that** it is a dicotyledonous crop plant, in particular from the family Asteraceae, Brassicacea, Compositae, Cruciferae, Cucurbitaceae, Leguminosae, Rubiaceae, Solanaceae, Sterculiaceae, Theaceae or Umbelliferae.

14. The transformed plant according to claim 13, **characterized in that** it is potato, Arabidopsis thaliana, soybean or oilseed rape.

15. A nucleotide sequence as shown in sequence No. 1, coding for leghemoglobin for use in a plant according to any of claims 1 to 14.

16. A gene structure comprising at least one nucleotide sequence according to claim 15.

17. A vector comprising at least one or more nucleotide sequences according to claim 15 or one or more gene structures according to claim 16.

18. The plant according to any of claims 1 to 14 comprising at least one gene structure according to claim 16.

19. The plant according to any of claims 1 to 14 comprising at least one vector according to claim 17.

20. A nucleotide sequence as shown in the sequences No. 3 and 5 coding for hemoglobin for use in a plant according to any of claims 4 to 14.

21. A gene structure comprising at least one nucleotide sequence according to claim 20.

22. A vector comprising at least one or more nucleotide sequences according to claim 20 or one or more gene structures according to claim 21.

23. The plant according to any of claims 4 to 14 comprising at least one gene structure according to claim 21.

24. The plant according to any of claims 4 to 14 comprising at least one vector according to claim 24.

25. A method for modifying the storage reserve content in plants, **characterized in that** it comprises transforming plants in such a way that they express at least one leghemoglobin.

26. The method according to claim 25, **characterized in that** the plants are transformed in such a way that they comprise at least one sequence No. 1 coding for a leghemoglobin.

27. The method according to claim 25 or 26, **characterized in that** plants are transformed in such a way that they comprise a sequence with approximately 70% identity with the sequence No. 1.

28. A method for modifying the storage reserve content in plants, **characterized in that** it comprises transforming plants in such a way that they express at least hemoglobin or one leghemoglobin and at least one hemoglobin.

29. The method according to any of claims 25 to 28, **characterized in that** the leghemoglobin and hemoglobin is selected from plants of the group consisting of *Arabidopsis thaliana*, *Lupinus luteus*, *Glycine max*,

Medicago sativa, *Medicago trunculata*, *Phaseolus vulgaris*, *Vicia faba*, *Pisum sativum*, *Vigna unguiculata*, *Lotus japonicus*, *Psophocarpus tetragonolobus*, *Sesbania rostrata*, *Casuarina glauca* and *Canvalaria lineata*.

30. The method according to any of claims 25 to 29, **characterized in that** the leghemoglobin and/or hemoglobin is derived from Lotus japonicus and Arabidopsis thaliana.

31. The method according to any of claims 25 to 30, **characterized in that** the plants are transformed in such a way that they express the leghemoglobin and hemoglobin in a storage-organ-specific manner.

32. The method according to any of claims 25 to 31, **characterized in that** the plants are transformed in such a way that they express the leghemoglobin and hemoglobin in a tuber-specific and/or seed-specific manner.

33. The method according to any of claims 25 to 32, **characterized in that** the plants are transformed in such a way that they comprise at least one sequence No. 3 and/or No. 5 coding for hemoglobin or at least one sequence No. 1 coding for a leghemoglobin and at least one sequence No. 3 and/or 5 coding for hemoglobin.

34. The method according to any of the preceding claims 26 to 33, **characterized in that** the plants are transformed in such a way that they comprise sequences with approximately 70% identity with one of the sequences No. 1, 3 and/or 5.

35. The method according to any of claims 26 to 34, **characterized in that** the plants are transformed in such a way that they produce starch and/or oil.

36. The method according to any of claims 26 to 35, **characterized in that** monocotyledonous crop plants, in particular of the species Gramineae, are transformed.

37. The method according to any of the preceding claims 26 to 36, **characterized in that** dicotyledonous crop plants, in particular from the family Asteraceae, Brassicacea, Compositae, Cruciferae, Cucurbitaceae, Leguminosae, Rubiaceae, Solanaceae, Sterculiaceae, Theaceae or Umbelliferae are transformed.

38. The method according to any of the preceding claims 26 to 37, **characterized in that** potatoes, Arabidopsis thaliana, soybean or oilseed rape are transformed.

39. The method according to any of the preceding claims 26 to 38, wherein **characterized in that** at least one nucleotide sequence according to claim 15 is used for the transformation.

40. The method according to any of claims 25 to 39, **characterized in that** at least one gene structure according to claim 16 is used for the transformation.

41. The method according to any of claims 25 to 40, **characterized in that** at least one vector according to claim 17 is used for the transformation.

42. The method according to any of claims 28 to 41, **characterized in that** at least one nucleotide sequence according to claim 20 is used for the transformation.

43. The method according to any of claims 28 to 42, **characterized in that** at least one gene structure according to claim 21 is used for the transformation.

44. The method according to any of claims 28 to 43, **characterized in that** at least one vector according to claim 22 is used for the transformation.

45. The use of a plant according to any of claims 1 to 14, 18 or 19 for the production of starch and/or oil.

46. The use of a plant according to any of claims 1 to 10, 11 to 24 for the production of starch and/or oil.